

Appl. No. 10/714,131
Arndt. dated May 26, 2004
Reply to Office action of April 13, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-16 (canceled)

Claim 17 (previously presented): A method of representing road geometry comprising:
determining an arc length between two points along a road;
determining a chord length between said points along the road; and
comparing said arc length to said chord length;
whereby a result of said comparing is an indication of how much the road curves
between said two points.

Claim 18 (previously presented): The method of Claim 17 further comprising:
using said indication of how much the road curves to adjust a speed of a vehicle.

Claim 19 (previously presented): The method of Claim 17 further comprising:
storing said indication of how much the road curves in a geographic database.

Claim 20 (previously presented): The method of Claim 17 wherein said determining steps are
performed using shape point data that represent geographic coordinates at locations along the
road.

Claim 21 (previously presented): The method of Claim 17 wherein said step of comparing is
performed by an application in a vehicle.

Claim 22 (previously presented): The method of Claim 21 wherein said step of comparing is
performed using data contained in a geographic database located in said vehicle.

Claim 23 (previously presented): The method of Claim 17 wherein said step of determining
said arc length comprising determining an approximation of a distance along the road between
said points.

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Claim 24 (previously presented): The method of Claim 17 wherein said step of determining said chord length comprising determining an approximation of a straight-line distance between said points.

Claim 25 (previously presented): The method of Claim 17 wherein said result of said comparing is a bowing coefficient.

Claim 26 (previously presented): A geographic database formed according to the process of Claim 17.

Claim 27 (previously presented): A geographic database comprising:
a data representation of a plurality of roads in a geographic region;
wherein said data representation includes an indication of curvature along at least one of said roads; and
wherein said indication of curvature includes a comparison between an arc length between points along the road and a chord length between said points.

Claim 28 (previously presented): A method of operating a vehicle along roads using the geographic database of Claim 27, comprising:
using said indication of curvature to adjust a speed of a vehicle.

Claim 29 (previously presented): The method of operating the vehicle of Claim 28 wherein a speed at which said vehicle is moving is reduced as said vehicle approaches a portion of said roads at which said comparison of said arc length and said chord length is relatively higher.

Claim 30 (previously presented): The method of operating the vehicle of Claim 28 wherein a speed at which said vehicle is moving is increased as said vehicle approaches a portion of said roads at which said comparison of said arc length and said chord length is relatively lower.

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Claim 31 (previously presented): The geographic database of Claim 27 wherein said arc length is an approximation of a distance along the road between said points.

Claim 32 (previously presented): The geographic database of Claim 27 wherein said chord length is an approximation of a straight-line distance between said points.

Claim 33 (previously presented): The geographic database of Claim 27 wherein said comparison between said arc length and said chord length is a bowing coefficient.

Claim 34 (previously presented): A method of determining how much a road curves comprising:

determining an approximation of an arc length between two points along the road;
determining an approximation of a chord length between said points; and
comparing said arc length to said chord length, wherein a result of said comparing is an indication of how much the road curves between said points.

Claim 35 (previously presented): The method of Claim 34 wherein said steps of determining are performed using shape point data that represent geographic coordinates along the roads.